GEELONG NATURALIST

MONTHLY PUBLICATION OF THE GEELONG FIELD NATURALISTS CLUB INC

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MARCH 1998

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COMING EVENTS

MARCH 3	General Meeting	* Karen Alexander	"Macquarie Island"
7,8,9	Biodiversity Group Excursion	Laver's Hill	
7,8,9	VFNCA Campout	Marysville	
10	Plant Group Meeting		"Central Highlands Plants"
15	Excursion	The Basin - Edwards Point	Leader: Dave King 5259 3023
24	Bird Group Meeting	Will Steele	"Bird-of-Prey Watch"
25	Biodiversity Group	Workshop Meeting	
APRIL			
7	Annual General Meeting	Members Night	
12	Biodiversity Group Excursion		
14	Plant Group Meeting		"Lilies, Noon and Marsh Flowers"
19	Excursion	You Yangs	Leader: Joe Hubbard 5229 2898
22	Biodiversity Group	Workshop Meeting	
28	Bird Group Meeting	Barry Lingham	"Spoonbills and Egrets"

* CHANGES TO PROGRAM
\+ ADDITIONS TO PROGRAM

EXCURSION NOTICE
. . . Dick Southcombe

Refer Page 12 Vol 33 No 9.

A special club excursion will be held on **Saturday 4th April** for a familiarisation walk of the Ted Errey Nature Circuit.

We will meet at the Ballan/Clarkes Roads intersection at 9.30am for a preliminary discussion with Ranger Chris Worrall before proceeding to various circuit access points in the National Park. At the conclusion of our morning walks we will lunch together and share notes at Stony Creek picnic area before walking a different section in the afternoon. Car shuttles will be arranged.

Different people see different features - we need to be aware of all the features of every section. Your help is vital if our club is to achieve a successful outcome.

If you are able to attend, please list your name on the special excursion sheet tonight or 'phone me on 5243 3916 before Thursday 2nd April. □

April issue . . .

Dave King reports on a find at Jerringot and **Ade Foster** tells us about the 'Old Lady's Shawl'.

Space did not permit the inclusion of these articles this month.

Some observations could not be included last month due to the very large number. Even if observations are not printed, they are recorded in the club data base. □

New members . . .

We are pleased to welcome the following new members who joined the club in February.

Mrs M Ealey
Mr James Turner

BIO-DIVERSITY GROUP
. . . Ade Foster

Our **March excursion** will be to Big-Tree Reserve in the Otway Ranges between Lavers Hill and Apollo Bay, on the Labour Day long weekend, March 7 - 9. The excursion into the Big-tree Reserve will be on Sunday 8th. Anyone interested in joining us can meet at the War Memorial, Main Road, Apollo Bay at 8.30 am. All welcome. If you are definitely planning to attend, let me know to be sure that we wait for you.

Our **April excursion** is scheduled for Easter Sunday, so, we have decided to combine our Bio-diversity excursion with the Club excursion to the You Yangs on the following Sunday, 19th April. Watch the Naturalist for meeting places and times.

The topic for our **March meeting**, Wednesday 25th, will be "Spiders and Their Relatives". Please come along and bring spiders from your garden or local bushland. Live ones can be released back, dead ones gratefully added to the collection.

More Bio-diversity Group news appears on pages 10 & 15. □

APRIL MEETING
. . . Dick Southcombe

The normal formalities of our Annual General Meeting will occur at the April 7 general meeting.

At its conclusion we will be treated to a talk about early natural history publications and the records of the original G.F.N.C. by Trevor Pescott and Margaret Cameron.

Members are invited to bring appropriate books, cuttings etc and comparable current publications.

Also, see article on page 8 of this issue. □

EXCURSION NOTICE
. . . Dave King

15th March, 1998
Lake Lorne, The Basin & Edward's Point Wildlife Res.

Melways Maps 238 & 241
Leader: Dave King 5259 3023

Meet at Karingal, for 9 am departure.

You will be led to Lake Lorne, Reserve Rd., Drysdale to meet me, and anybody else who lives in the vicinity, at 9-30am. We will spend a short time checking water birds, several species of Duck, Stilt, Black-fronted Plover etc.

10-15am proceed to The Basin. Botanically fairly diverse, Grass Trees on the Peninsula reach their northern limit here .

11-00am proceed to Edward's Point, via Drysdale Station (Toilet Stop). To Drysdale, turn right into Murradoc Rd., head for St. Leonards. At 9km turn right into Bluff Rd. a further 6km turn right into Cliff Rd., narrow & winding, left into Beach Rd. Park on open ground at Reserve entrance.

12 noon. Lunch.
No picnic tables are available here.

1-00pm take track into Reserve. Closed Tea tree & Acacia bush. Wire Mistletoe very evident, Mistletoebird often seen. After about 2km we will take a track east to the beach & return to car park.

3-30pm conduct specimen table and observations.

4-00pm break-up. □

PLANT GROUP

March 10th meeting.

Please bring reference books which will aid our study and understanding of Central Highland Plants observed during the VFNCA campout at Marysville. □

MARCH
. . . with Joe Hubbard

Fly with a Storm Bird; Beaut Walk 7; Variable, Sharp and Bearded; And Also:

Here I am, in my backyard, small patch of sky above, trying to aim binoculars on to the swifts as they slice into a strong northerly, then catch a glimpse and nothing more.

For swift matching you need a bit more than the sky above 'our place'. So if you are frustrated like I, go find some elevated place with a see forever view, where you can watch a brooding day bring in a storm and swifts and maybe a sunset of such extravagance that you will feel nature has squandered all.

And when should you go to see these most aerial of birds? Soon! During March they start their long journey back to their northern hemisphere nesting sites. Swifts are said to feed at lower levels in mornings and evenings and can appear over Geelong just before a weather change.

If you are not familiar with swifts, then look for a big, fast flying swallow. If you have a field guide check out the White-throated Needletail Swift. This is the one you will probably see.

Something I will always remember. An ant swarm emerging for its nuptial flight and a small flock of swifts zapping them as they took off. That was rather special. If the swifts disappoint get in some raptor watching - look for Little Eagles, Whistling Kites and Brown Falcons.

Beaut Walk 7 with Dennis Greenwell and Claire McCormick:
Park your car in the lower car park at Sheoak Picnic Ground and cross the road that you have just come along, following the sign to Kalimna Falls. This walk takes you on the route of the old timber tramway past Rough and Smooth Tree Ferns and towering Messmates. About five minutes into the walk, you come to one of these fallen giants of the forest, lying across the path. A thick slice has been taken from it to maintain the path and now, many years on, the cuts have been 'healed' by the mosses that grow everywhere on the trunks. The understorey is thick and at first the Kalimna Creek is hard to see, but after a few minutes, it can be first heard and then seen..

Birds can be heard in great variety though they are less often seen due to the undergrowth. However, one of the more notable sightings on our last visit in February was a Rufous Fantail
Access: Erskine Falls Road (William Street, Lorne) and turn left into Otway Street (Allenvale Road). Map available in Lorne.

Variable, Sharp and Bearded - Midge Orchids:
These tiny orchids have an onion-like, thin, green or purplish leaf with a cluster of tiny flowers growing on a spike. The flowers look like small dark-purplish or purplish-brown insects. Along with scent and a labellum or lip (a modified petal) which flutters like an insect, the orchid is well setup to attract insect pollinators.

It is with this group of orchids that common names get you into trouble e.g. two Hairy Midges which are different species. Still, if you find one in heath or bush call it a Midge and you are doing well. And if you want to impress call it a *Genoplesium.*

And Also:
Red Wattlebirds - These big honeyeaters seem to wander around through late summer to winter - no doubt chasing food sources. Many would be kids told to leave home. Quite large flocks (forty birds) can pass through.
Bellminers - Botanical Gardens, Melbourne.
Waders - return to the northern hemisphere. But there is still time to catch them with many showing breeding plumage.
Flying Fox - well it looked like one, hanging from a power line, very dead, in Albert Street, West Geelong. Unusual sighting?
Flowering - Drooping She-oak, small tree to ten metres. Coastal and inland. Male and female flowers on different trees.
Wirilda Wattle - flowering Feb/March. Often infested with Wire-leaf Mistletoe. This wattle has a distinctive hook on leaf tips. See it at Edward's Point Reserve or Lake Victoria. □

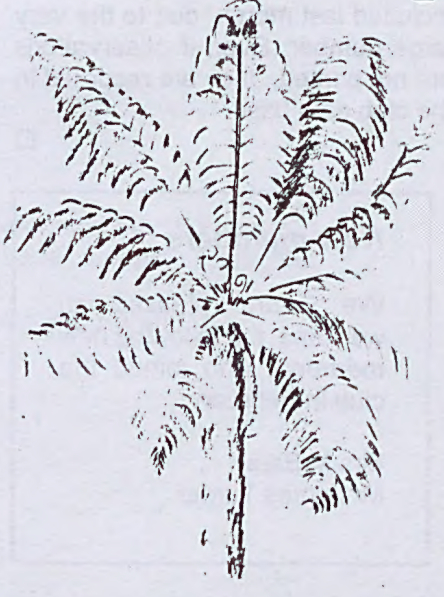
OTWAYS CAMPOUT
- Some of The Birds

Polly Cutcliffe.

A visit to the Otways provides the opportunity to experience some birdlife rarely observed around Geelong. At the Tanybryn campsite itself we enjoyed a wealth of birds - spinebills, scrubwrens, fairy-wrens, three species of honeyeaters, silvereyes, Grey Fantails, Crimson Rosellas, King Parrots, Yellow-tailed Black-Cockatoos, Golden Whistlers, and the call of the Yellow Robin throughout the day and well into the evening.

On the outings we were treated to some wonderful sightings - bristlebirds calling at the coast (and seen fleetingly by some); an Olive Whistler in the forest; Rufous Fantails showing off their glorious colour; White-throated Needletails low overhead; a white morph of the Grey Goshawk; Yellow-faced Honeyeaters carrying the shining red fruit of the native currant in their bills (presumably for nestlings); Superb Fairy-wrens frantically feeding a young Shining Bronze-Cuckoo; White-throated Treecreepers calling in almost every habitat; two nesting finds by Graeme Tribe - Yellow Robins at their cryptic lichen-decorated nest, and a Grey Shrike-thrush feeding nestlings less than a metre in front of him; and last, but certainly not least, at our final destination on the Grey River, a female Rose Robin.

Birdwise it was a most satisfying weekend, with a grand total of 60 species, thanks to Trevor's excellent planning and leadership. □



PLANT GROUP
. . . Joe Hubbard

Maybe the highlight of the Plant Group's meeting was not Polly Cutcliffe's rendition of a Brown Treefrog's call but it was good enough for me to identify our back garden frog. Between this sort of activity the group undertook some serious research into the lives of Hyacinth Orchids, Mint Bushes, Astelias and Waxberries.

Flowering from December to February, Hyacinth Orchids with their tall spikes of showy flowers are a familiar sight in their bush setting.

There are several species in Victoria. The two most likely to be observed are the Rosy Hyacinth *Dipodium roseum,* with pink flowers dotted with darker pink and the Purple Hyacinth showing white flowers heavily blotched with pink.

This orchid is unusual because it is a leafless saprophyte. It cannot manufacture its own food so it depends upon fungi to supply its nutrients.

These soil-living mycorrhizal fungi have a vital relationship with green plants. In exchange for a tree's provision of sugars and carbohydrates (from photosynthesis in green leaves) the fungi provide chemicals and minerals which the tree cannot obtain for itself. Also, would you believe, antibiotic and antiviral compounds.

It seem that the Hyacinth Orchid's relationship with fungi is one way - it may make no contribution to the relationship. The orchid's dependence does not stop there. Its seeds need a particular mycorrhizal fungus to assist germination. No fungus - no new plant.

A long time ago in 'yesterdayland', when my mother caught the Christmas spirit, I was sent down to the creek to pick Victorian Christmas Bush to decorate the dining room for Christmas day. The Christmas Bush *Prostanthera lasianthos,* with its two-lipped, bell-shaped, white flowers spotted with orange and purple, thrown in amongst some gum leaves, made for a real bush Christmas - if one was lucky.

Like most mint bushes, this tall shrub or small tree, is a spectacular sight when in bloom.

Another mint bush, the Balm *Prostanthera melissifolia*, with its lovely mauve flowers, cannot be missed if you are driving through the Otway Ranges in October.

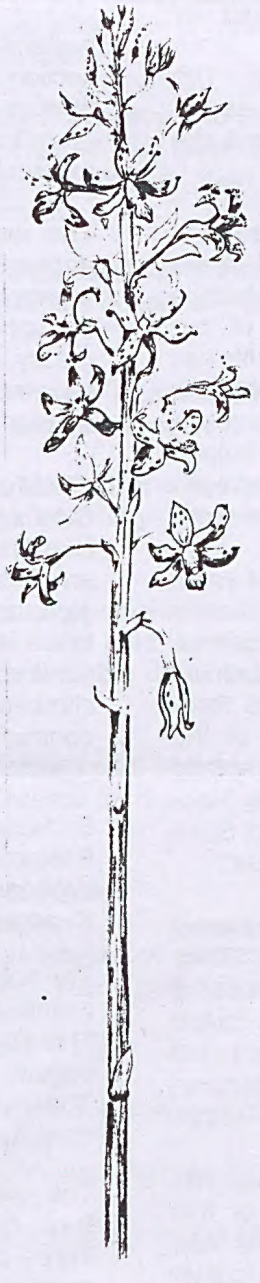
Our local mint bush, the Snowy *Prostanthera nivea*, is a bit dowdy when compared with its close relatives.

If you become besotted with mint bushes, then seek out the Dense, Rough and Hairy varieties in the Brisbane Ranges.

The Tall Astelia *Astelia australiana* and the Tasmanian Snow-berry *Gaultheria hispida* are two rare plants of the Otway forests that few of us will ever see. The Tall Astelia is a tussocky sort of plant with sword-like leaves up to 230cm in length and smallish, clustered, green flowers followed by orange fruit.

Any action that creates gaps in the closed forest canopy encourages the growth of aggressive native plants such as Coral Fern and Saw Sedges to the detriment of the Astelia.

The Tasmanian Snow-berry is something of a mystery. Until recently it was found only in Tasmania. □



CONSERVATION MATTERS
. . .Valda Dedman

We have objected to yet another subdivision in Painkalac Valley, and to the excision of land from the Alpine National Park for addition to the Falls Creek Ski Resort. We will make a submission to the EEC about the significance of Victoria's box-ironbark forest and the need to protect it in reserves, and also to the Limeburners Point Management Plan. Have you any ideas about the use of this area?

Good news on the home front. The campaign to save Ingamells at Ocean Grove as a park has been successful and will be protected under the Trust for Nature. The catch is that it still has to be paid for, and fundraising activities will be ongoing for some time. It also appears that land will be added to Buckley Falls Park.

I attended more Environment Management Strategy work- shops and the regional launch by the Minister for Conservation and Land Management of the Victorian Biodiversity Strategy. Let us hope these strategies will bear fruit in the way of protection of ecosystems and endangered species.

What is important is to ensure that the Club's accumulated knowledge can be used by decision makers. One way of making it available is to enter it on databases, such as the *Wild Plants of the Ballarat Area* and *Timelines*. It is not difficult, and even fun! We will be holding training sessions in the near future. I need a team of dedicated people. Here is your chance to become computer literate.

Please let me know if you can help. □

BIRD GROUP REPORT
. . . Barry Lingham

February 24th 1998

This month's speaker was Margaret Cameron, who spoke to our group about her trip to Southern Africa. During her trip, Margaret observed over 360 species of birds plus numerous types of other wildlife.

Margaret's 4 week tour began in Zambia, a country with a population of approximately 8 million people. Zambia became independent in 1964 and it has been ruled by President Kuanda since independence, until recently. The country is facing difficulties as the food output has dropped and the infrastructure has declined.

At the capital, Lusaka, several interesting birds were noted in the suburban gardens. Blue Waxbills were common (a relative of our finches). The local crow species has a white band across the chest which is very eye-catching. Other birds included the Black-headed Bulbul, Grey-headed Sparrow and Red-eyed Dove. Many lark species were seen.

From Lusaka, the tour moved south west towards Victoria Falls. The dry plains were the home of elephants, zebras and deer species such as impala. Birds noted included Red-billed Oxpecker (a relative of the starling that eats ticks off animal hides), Woodland Kingfisher, Red-billed Hornbill, three species of Stork and the Bronze-winged Courser.

There are five species of Bee-eater found in Southern Africa. Their relative, the Lilac-breasted Roller is a beautiful bird with a deeply forked tail. The tail of the Long-tailed Widah is even more spectacular, being several times the body length.

The White-headed Vulture was one of several vulture species of this region. The Giant Eagle-owl was also noted - it is one of the largest owls in the world.

Margaret showed shots of the magnificent Victoria Falls which are formed when the Zambesi River drops over 100 metres. The falls are close to the border with Zimbabwe and Botswana.

In Botswana, the country was mainly swampy grassland or sandy country with scattered trees. The population of 1.5 million rely on the beef, tourism and mining industries.

Interesting birds included the Yellow-bellied Bulbul, Purple Roller, Secretary Bird and African Fish-Eagle. Francolins and sand grouse species could be seen trying to merge with the ground cover.

In the centre of Botswana is the Okavango delta. This huge wetland is formed by the southern section of the rift valley that runs through the African continent. The Okavango River drains into this sunkland.

The aerial shots of the region appeared to show large grassy areas with waterways cutting through them, but in fact the grassy appearance was actually huge reed beds that grow in the swamp.

Wildlife included Wilderbeast, Giraffes and many DLTs (Deer Like Things) such as Kudu. When an elephant passed close to the group one guide asked every one to be still and quiet. An older guide quickly ran to a tree and climbed it, which was a bit contradictory to the first set of advice.

Birds noted were Guinea Fowl, Eastern-White Pelican, Bennett's Woodpecker and Lesser-striped Swallow.

The next country visited was Namibia in south west Africa. This country was once a German colony. It is generally very dry. The Kalahari Desert stretches from Botswana into Namibia.

The coastal region near Walvis Bay had European Avocets, Three-banded Plover, and tern species. Further inland, Lesser Flamingoes, Ostrich, larks, chats and bustards were seen. Sociable Weavers, with their large grass nests, were one of several weaver species.

The Etosha National Park was located beside a 100 Kilometre long salt pan that is usually dry. Lions were seen on several occasions and the general regulation banning people from getting out of their vehicles seemed to be a sensible rule.

Birds included Blacksmith Plovers, African Shelduck, Red-billed Teal, Double-banded Courser and ant-eating Chat. DLTs included Onyx and Springbok.

Further South, in South Africa, the Cape of Good Hope National Park contained Sugar Birds, Cape Robin, Red-winged Starling, Black-necked Heron and the Mouse Bird.

Other birds seen in journeys inland and along the west coast were the Jackal Buzzard, Cape Francolins, Dikkop, Bully Canary, Rock Pigeons, Cape Teal and a Black Harrier. The colony of Jackass Penguins was unusual as it has only recently been formed and it is on a beach close to a major township.

Margaret took us on a wide ranging tour of all Southern Africa that was enhanced by her many interesting slides and detailed and often humorous commentary.

If ever the South Africans need a tourism ambassador to convince people to travel and view the natural wonders of the animals and birds of that part of the continent, they could not go past hiring Margaret for the task.

Next Month's Speaker
Will Steele is speaking to us on the "Bird of Prey Watch" program. Come along and find out how this survey is done and you may be able to contribute to the knowledge about our birds of prey. Meeting night is March 24th at 8:00 pm.

□

REEDY LAKE STUDY

By Trevor Pescott

14 Victoria Terrace, Belmont, 3216.

Background

Prior to European settlement, Reedy Lake was an ephemeral wetland which received water from the elevated land of the Bellarine Peninsula and from floods on the Barwon River. Although the river was saline and tidal, a low levee, which had been built from silt carried in flood-water and deposited among the reeds and lignum along the north bank of the river, prevented this water from entering the lake.

The first barrage across the Barwon was built about 1838 to provide fresh water for Geelong township, then in 1899, the second or lower breakwater was constructed across the river at a point mid-way down this Reedy Lake river-bank. It was built to protect riverside industries, particularly tanneries at Marshall, from the damaging effects of the salty river water that was then being used by them.

Why this particular site was selected is not clear, but it may have been that Reedy Lake was seen as an overflow or by-pass for floodwaters in the Barwon. The water could flow into the lake above the breakwater, then return to the river below it, flowing out across low lying land at the south-east corner of the lake.

In 1953, State Rivers constructed a small inlet from the river above the breakwater into Reedy Lake but, although this provided a regular input of water, it drained out almost as quickly as it entered. The level of water above the break was, of course, higher than below it. Reedy Lake was still more often dry, or nearly so, than it was full and therefore an unreliable wetland as far as providing waterfowl for hunting was concerned.

So in the 1967-68 drought, the Fisheries and Wildlife Department put a low bank across the outlet, and the water in the lake was kept at a higher level than was naturally the case. Then in 1975, the department put in a larger inlet with gates to regulate the amount of water put into Reedy Lake.

It is generally accepted that the deeper, more permanent water did two things - it allowed European Carp to flourish, and wave action became severe particularly as the submerged vegetation was destroyed by the carp.

In the 1996-97 summer, the outlet bank was removed, the inlet channel blocked, and Reedy Lake was allowed to dry out. It was estimated that over 5 000 carp, many of them up to 10 kg in weight - too large for even pelicans to eat - were killed, and countless other smaller fish were consumed by the birds.

In January 1997, a Reedy Lake Management Group was formed comprising representatives of Parks Victoria, D.N.R.E., their Flora, Fauna and Fisheries branch, the commercial eel-fisheries who hold licences over Reedy Lake, Barwon Water, V.F.G.A. and G.E.C./G.F.N.C. Their role is to monitor the effects of the draining and to advise on appropriate management practices to maintain ecological diversity in the lake.

In April 1997, the V.F.G.A. excavated an outlet channel from the deepest part of the lake (known as the "big hole") through to the river, another from the shore to the big hole to improve access for the eel-fisheries, and built a drop-board regulator across the outlet.

Then on 28 May, the inlet was re-opened and water brought back into the lake.

To monitor the recovery of the lake ecosystem, a survey of birds and invertebrates was commenced, and in the second half of 1997, four field trips were carried out by members of the G.F.N.C. This report summarises the results.

1. Saturday 19 July, 1997.

The purpose was to bring together those members who share an interest in the survey. No listing of species was carried out, but the extent and methods were discussed. It was agreed that -

i Counts of birds seen along the shore, and from the shore-line, between the outlet regulator and Woods Road would be carried out.

ii Counts of birds seen during a boat trip from either the regulator or windmill across the big hole as far as feasible would be carried out.

iii Sampling of invertebrate and other fauna during the boat trip and along the shoreline in the vicinity of the windmill, would be undertaken.

iv There should be at least six counts each year initially over a two year period.

(Continued on page 6)

2. Saturday 20 September, 1977. (10.00a.m. to 11.30a.m.)

Boat supplied by Barwon Water.
Water level at regulator 0.52m.
Water temperature in big hole area 12.5°C (surface) 11.5°C (at 1m depth).
Weather fine, cool, scattered cloud, south-west wind.

Amphibians
Common Froglet *Ranidella signifera* high number of individuals calling.
Southern Brown Tree Frog *Litoria ewingi*

Invertebrates
Water samples produced only small numbers of midge *Chironomous sp.* larvae and pupae, daphnia, ostracod *Candona sp.* and bug *Agraptocarixa sp.*

Birds
43 species, 3769 individuals.
Black Swan were plentiful (517) with 218 at Moolap Station Road and 137 at Woods Road.

Ducks were in fair numbers with Chestnut Teal (400) and Grey Teal (200) the most common.

Ibis were seen in very large numbers, with 2 000 Straw-necks in the area. On the cumbungi and reed beds, about 100 Australian White Ibis were in small groups as though they had, or were about to, establish nesting territories.
Masked Lapwing - pair with 2Y at Woods Road.

3. Thursday 30 October, 1997. (9.00a.m. to midday)

Boat supplied by Parks Victoria.
Water level at regulator 0.5m.
Water temperature 16°C (surface) 14.5°C (at 1m depth).
Weather overcast, light s.w. wind, showers late in morning.
Water turbidity moderate, visibility to c 1m.

Amphibians
Common Froglet *Ranidella signifera* many individuals calling.
Southern Brown Tree Frog tadpoles *Litoria ewingi* at stage ca. No.34.#

Martin, A.A., 1965. Tadpoles of the Melbourne Area. *Vic. Nat.* 82 : 139-149.

Invertebrates
The population of daphnia had increased considerably since the previous survey, and a broader range of invertebrates were present in the water samples. The pond snail *Physastra gibbosa*, shrimp *Paratya australiensis*, water mites *Hydracarina sp.*, damselfly and midge larvae, and backswimmers *Anisops sp.* were collected.

A sample of mud where Sharp-tailed Sandpipers were feeding contained larvae of a fly *Limnophora sp.* and a beetle *Dytiscidae sp.*

Birds
54 species , 1781 individuals.
Black Swan in smaller numbers (104) than in September.
Duck numbers low, total 182 mainly Grey Teal (103).
Little Black Cormorant - 43 perched on posts or flying over, some juveniles.
Ibis - only 11 Australian White, no Straw-necked. The large numbers in September, and the apparent preparation for nesting, have disappeared.
Latham's Snipe - 7 including 6 Fitzgeralds-Moolap Station Roads.
Sharp-tailed Sandpiper - counted 735 but this was a conservative figure. Most (660+) feeding among mud clods along the shore between Fitzgeralds and Moolap Station Roads. A sample of mud taken where the birds were feeding near the windmill contained fly larvae (*Limnophora sp.*) and beetle larvae (*Dytiscidae sp.*)
Red-kneed Dotterel - 7 seen Fitzgeralds-Moolap Station Roads.
Golden-headed Cisticola - up to 40 birds, the males brightly colored, singing and (courtship?) displaying.

(Continued on page 7)

4. Thursday 4 December, 1997. (9.00a.m. to 2.00p.m.)

Boat supplied by Darren Osborne.
Water level at regulator 0.5m.
Water Temperature 16° C (surface) 14°C (at 1m depth).
Weather mild, cloud clearing, light south wind.
Water turbidity high, visibility to c. 0.5m. Cause of increased turbidity mainly algae and detritus disturbed by enormous number of backswimmers.

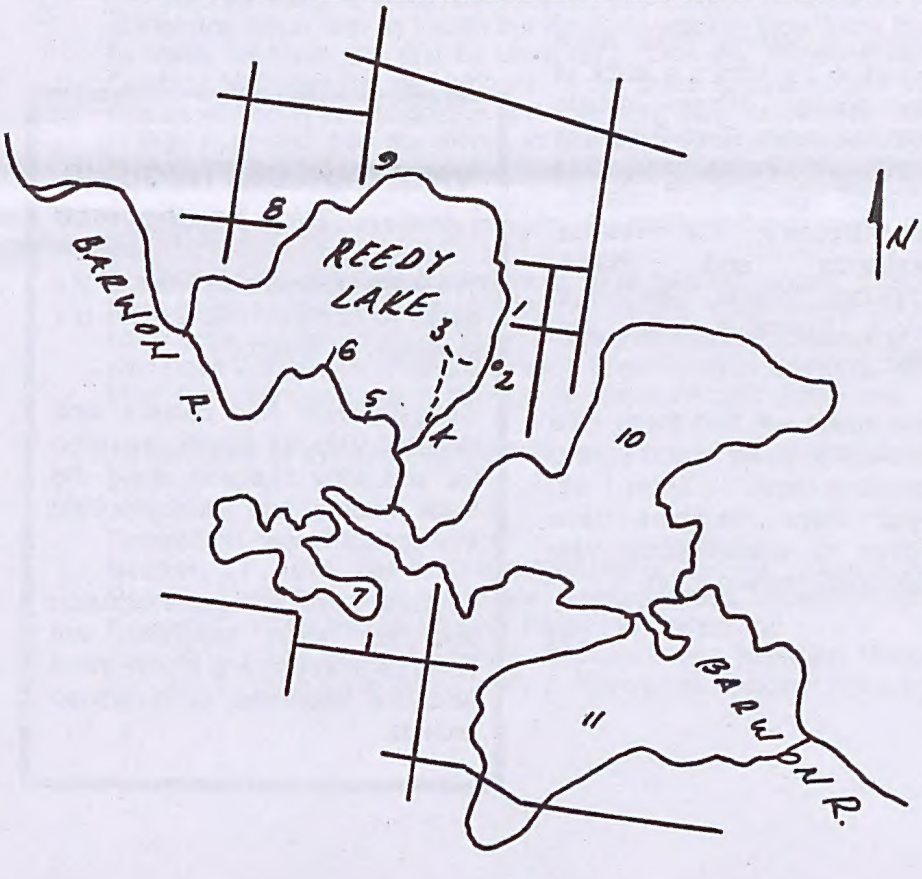
Amphibians
Common Froglet *Ranidella signifera* calling.
Southern BrownTree Frog *Litoria ewingi* juvenile and tadpoles

Invertebrates
The diversity of species and their populations have continued to rise. Backswimmers *Anisops sp.* were particularly numerous while other aquatic bugs and beetles, midge, dragonfly and flies were collected.

Birds
35 species, 2591 individuals.
Black Swans have nested with five broods of 8, 2, 2, 1 and 1 cygnets respectively.
Ducks were in very small numbers, with 50 Australian Shelducks the largest total.
Australian White Ibis were absent, 12 Straw-necked near regulator.
Migratory waders were plentiful, particularly Sharp-tailed Sandpipers (1 387+) that were feeding among the clay clods and broken-off, dried cumbungi stumps. The number listed is conservative because the birds were difficult to see in this habitat.
Black-winged Stilts were common (137 counted).
Whiskered Terns were again present in large numbers with several hundred roosting in a dense group on exposed mud banks in the lake off Woods Road.
Yellow-tailed Black-Cockatoo - 1 seen.
Small passerines - fairy-wren, chat (probably nesting), skylark, reed-warbler, grassbird and cisticola - all in high numbers.

Vegetation
There is little regeneration on cracked soils even in shallow water, And little vegetation in water deeper than 15cm. There is some scattered, emergent sedge (*Eleocharis sp.*) in the 15-25cm depth, and some pondweed (*Potamogeton sp.*), not yet emergent, in 15cm depth on the un-cracked soil. In the muddy areas where water is less than 10cm, there is a wide range of plants including milfoil, knotweed, water-ribbons, monkey-flower, buttercup, cotula, aster-flower and various sedges. Buttercup grows in water up to 6cm deep.

(Incidentally, the channel **below** the regulator has a much wider diversity of plants even in deeper water than above.)



LIBRARY NOTES
. . . Betty Moore

Parkwatch Dec '97 (VPNA). This year, 1998, marks the centenary of Victoria's national parks. Coverage of the VPNA conference 'The Next Century', held at Melbourne University last October, makes interesting reading.

'The Campaign for Victorian National Parks' 1946-1956 by Janet Coveney, describes the moves made by concerned groups to create a central body to control the existing national parks system. The FNCV spearheaded this ten year campaign.

Natural Resources Dec 1997 (NRCL) 'Chasing Shadows' tells the story of how Craig Reid, a ranger with the Grampians National Park was finally rewarded with a photo, taken by remote camera, of the Brush-tailed Rock Wallaby, a small, rare creature which had not been sighted by humans in this area for ten years.

There are also articles on the impacts of recreation in the Australian Alps, the need for conservation of temperate woodlands and 'the fascinating world of soil crust lichens, mosses and liverworts', amidst other interesting reading.

Wingspan Dec 1997 the compilation of a new Atlas of Australian Birds, the most comprehensive atlas ever, is to begin.

'Birds on Farms' by Geoff Barrett tells how a recent survey indicates that the health and diversity of remnant woodland habitat is also as critical as just planting trees in agricultural areas.

'Letter from Gluepot' is a report of activities going on at Bird Australia's new Murray-Mallee Reserve.

Australia Nature Summer 1997 has the usual informative array including fossil finds in the Sydney area, Tree-kangaroos, octopuses (our waters contain at least 60 species), Echidnas and Mammal Pollination.

NEW BOOKS

'Cuckoos, Nightbirds & Kingfishers' is published in association with the Australian Museum's National Photographic Index of Australian Wildlife.

The book contains, as well as beautiful coloured photographs, full descriptions, locality maps and anecdotal material about each bird. For this book, our thanks go to Judy Rowe. Judy has previously given our library two other books in this series on 'Seabirds and Shorebirds'

'Worms to Wasps' An illustrated guide to Australia's Terrestrial invertebrates by Mark Harvey and Alan L.Yen. A useful identification book, it begins with a chapter on classification, collection & study of terrestrial invertebrates and follows through with illustrated articles on individual classes and species.

'Gem Minerals of Victoria' Special publication Number 4 of the Mineralogical Society of Victoria is published in conjunction with the Royal Society of Victoria. It is clearly set out with colour photographs, locality maps and interesting descriptions of gem minerals and where they may be found in this state.

Graeme & Wilma Tribe have donated to the library a stack of junior books. These include 'Australian Junior Field Guides to Creeks and Ponds' and 'The Backyard'. Books on Crocodiles and Alligators, the Walrus, Woodlands and Plains, Temperate Forests, Glaciers & Icecaps, Rivers & Lakes and Birds.

Many adults will find these little books full of easily absorbed and interesting facts. I know I do. Maybe some members have children or grandchildren who would enjoy reading them.

□

A NEW CLUB YEAR
. . . Dick Southcombe

OUR next meeting on April 7 marks the beginning of OUR club's 38th year for which a new committee will be elected.

As all positions are vacated annually we need nominations for the positions of President, Vice-President, Secretary, Treasurer, Minute Secretary and seven ordinary members.

Less than a full committee makes it difficult to manage OUR club affairs in a satisfactory manner.

It seems likely that we will receive nominations for President, Treasurer and Minute Secretary, but at this stage there are no positive indications for the other offices of Vice-President and Secretary. We also need another three ordinary committee members above this year's complement to achieve full strength.

Who is prepared to accept nomination? Who will encourage someone to accept nomination?

Nomination forms are being distributed in this month's 'Geelong Naturalist'; please do all you can to ensure that OUR club has a complete committee for 1998-1999.

□

VALE CARLEEN HUGGINS
Dick Southcombe

We were saddened to learn of the death of Carleen and extend our sympathy to Winston.

Carleen, with her camera and Winston with his library, travelled far and wide camping along the track finding and photographing that special flower.

Orchids were Carleen's passion and her slide collection will continue to inform and inspire those who are interested in Australian orchids.

WRITINGS ABOUT GEELONG'S BIRDLIFE

By Marilyn Hewish

97 Grey St., Bacchus Marsh, Vic. 3340

Recently, I have been making detailed searches of books and magazines for information on the birds of Point Henry and Moolap Saltworks, for a future article in the *Geelong Bird Report*. I pore over books by Charles Belcher and Trevor Pescott, articles by P.J. Wood (in Pescott 1996), and old copies of the *Geelong Naturalist*, and I realise how fortunate we are in the Geelong region to be able to draw on such a fine tradition of writing about birds.

I defy anyone to do a search through these works, and not become fascinated and caught up in the words, and the ideas and experiences described in them. It is impossible just to skim.

There is information on birds of course, fascinating in itself. But each book and article also captures a slice of history. I realise that it is not enough just to congratulate myself on how well I know the birds we have, but I have to understand how they came to be there, and sometimes sadly how they were lost. The natural world is not a finished work but a work in progress. There are some surprises. I will use Point Henry as an example. Charles Belcher (1914) never saw a Banded Stilt in the Geelong region, even though the Moolap Saltworks was in existence at the time. Between then and now, Banded Stilts discovered that the saltworks provided favourable habitat (shallow, high-salinity wetlands) year-round, and we often now find them there in thousands. But the expansion of these same saltworks spelt the end for a population of Southern Emu-wrens, as the saltpans swallowed up the samphire scrubland where they thrived. (Yes! Southern Emu-wrens at Point Henry! I was stunned too.)

There are valuable lessons here for conservationists: human intervention is viewed as evil, but it is not always so; and any changes we make or oppose may have complex and unforeseen consequences. We don't know it all. We must keep observing in the present, reading and learning from history, and writing for the future.

Which brings me to the other source of interest in these past works. Birds are not the only creatures which are part of a living history. These writings make up a social history of the bird-watchers of this region and of the Geelong Field Naturalists Club. We are part of a family of nature-lovers and bird-watchers which stretches back into the past and continues into the future. But the people we remember best are the ones who write. Much as we appreciate and value those who make other contributions to the club, only those who write will pass on their knowledge complete and uncorrupted to future generations.

The first issue of the *Geelong Naturalist* published in April 1964 contains names we all know (they must have been very young at the time). Through the years many members and others have contributed to the magazine, and the information base is now very large. But some contributors stand out. Trevor Pescott wrote a large part of that first issue, and as I scan the issues forward in time, I see the first article by Gordon McCarthy, the first by Valda Dedman, the first by Dave King. One day someone will look back and find the first words in the *Geelong Naturalist* by Joe Hubbard. I'll bet these special people would like a dollar for every article or report they've written in our magazine. But they don't do it for money. I think they do it because they have a passion in their lives and they are driven to share it, to communicate, to teach, and to inspire others with the same feeling. We have been blessed in that many bird-writers in Geelong have been as talented with the pen as with the binoculars. I can read anything by Charles Belcher, or by Trevor or Valda, and be entranced by the flow and rhythm of the words, the lively imagery, the clarity of the concepts, and the personal touches that come through.

To those of us who read the words of these talented writers, it seems as if writing must come as naturally to them as breathing, but I'm sure that is an illusion. As an inveterate writer myself, I know how daunting that first blank page can be, and how one sentence can represent a week in the library. So I would like to thank all those who have written and continue to write about birds in Geelong, for their efforts and their inspiration. I forgive them for making my search through the literature such a slow one.

As an editor of the *Geelong Bird Report*, I hope that this magazine too will play a valuable part in this fine tradition.

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BIO-DIVERSITY NOTES
. . . Ade Foster

Excursion February 2, 1998.

An even dozen met in the car-park at The Bluff at Barwon Heads for an afternoon rock-pooling and beach-combing. Braving a gale which felt like it was blowing straight from Antarctica we fossicked among the rocks and pools which were being exposed by the falling tide. There were the usual collections of shells and seaweeds, chitons and crabs, with a few very interesting discoveries adding brighter moments. The large black Elephant Snails were reasonably common, grazing along the rocks. Frank Scheelings caught a couple of little eels, species unknown, and a small fish with large fins, protruding eyes and little fleshy horns. Any ideas as to identity of these little fellows? Blennies rings a bell in the dim, dark recesses of my memory. They are quite common along the coast hereabouts. There were a number of very large black patches on the rocks in the cliff face, which, on investigation proved to be huge swarms of tiny, black brine flies, apparently sheltering from the wind.

We had a late afternoon cuppa in the carpark, watching the Singing Honeyeaters flitting through the scrub, then went our separate ways. Six of us decided to investigate Hospital Swamp on the way home. Instead of the usual walk along the lake proper, we walked along the levy bank between the lake and the house swamp, where the low water levels have exposed some mud-flats. Despite the wind we saw quite a few birds, including Greenshank, Red-capped Plover, Black-fronted Plover, Yellow Spoonbill, Australian Shelduck, Purple Swamphen and Black-faced Cuckoo-shrike. In spite of the wind, a very enjoyable day, made even more so by the realisation of how lucky we are to have all this right on our door-steps.

BIO-DIVERSITY MEETING

February 25, 1998.

The first meeting for the year was a well attended Show-n-tell with specimens collected by members over the summer break. Frank Scheelings brought along a good assortment of butterflies and moths from his holiday in Bright. He also had a very large stick insect, slightly damaged thanks to a bird, and some beautiful *Cerambycid* beetles or Longicorns. He reported that during a bushwalk one day, some horse-riders passed, the horses leaving their usual contributions. Within minutes, several species of little dung beetles, Scarabidae, had flown in and begun their bush beautification works. These same beetles seemed to ignore native animal droppings ... are they the species introduced to deal with cattle and horse droppings? We will investigate.

I brought along a small snake, a road-kill from Mannerim, near Queenscliff. I felt it was a copperhead, as did others I showed it to, but when asked 'Why do you think it is a copperhead', no-one had a definitive answer. Thinking it would be a simple process, I turned to my reference books on the subject. There are three possibilities in Geelong region for a snake of this colouring, the Common Brown Snake, *Psuedonacha textilis,* Tiger Snake, *Notechis scutatis* and Copperhead, *Austrelaps superba.* The Brown Snake has a divided anal plate, and paired subcuadal scales. Our specimen has single anal plate and subcaudals, as do both the Copperhead and Tiger snakes. So Brown Snake was eliminated.

Both Copperheads and Tigers are very variable in colour, ranging from black through brown and olive green to pale cream. . The head is only slightly broader than neck in both snakes, and both have round pupils. Both have a distinct **canthus rostralis**, the ridge from eye to nostril, and scale patterns of the head are similar, but *Jenkins and Bartell* have the supralabials and lower temporal diagonally barred giving the lip a striped appearance in the Copperhead. Mid-body scales in Copperhead are 15 rows (very rarely 17), mid-body scales in Tiger Snake are 17 rows (occasionally 19, but very rarely 15) Using a magnifying glass and my best squint I counted the scales, 15! and checked the lip, which with a little imagination could be called striped. Our specimen was probably a copperhead, but can we be sure?

The meeting was joined by a rather large wolf-spider, *Lycosidae*, which was seen scuttling across the floor towards us. I grabbed a container to capture it, and an extraordinary thing happened! The spider began springing into the air in a series of rapid little bounces, not unlike antelopes I have seen on TV. It continued this unusual behaviour for some time, making capture not only difficult, but hilarious, too.

□

JERRINGOT NEWS
. . . Valda Dedman

We have applied to the Corangamite Catchment Management Authority for a grant for weed eradication and more planting at Jerringot 'to enhance Latham's Snipe habitat', and for the upgrading of the Jerringot brochure.

Regardless of whether we are externally funded, we will soon be asking for a few hours of your time. It is largely through our efforts since 1972 that Jerringot is such an attractive site today.

On 17th February there were still 20 Latham's Snipe at Jerringot. They have to fly back to Japan, breed and return in time for **Snipefest 98**. We have asked the City for funding for the festival, which, snipe willing, will be held on 1st September. Children from Christ the King School have already submitted poster designs.

More of this later.

□

BIRD OF THE MONTH
. . . Valda Dedman

Australian Wood Duck

Name Australian Wood Duck *Chenonetta jubata*

Description Pale grey and brown duck with small bill, longish neck and upright stance.Two black stripes along back. Male has dark 'mane' along back of head, female has two white bands across face. In flight, conspicuous dark tipped wings with white trailing panel and pale grey forewing.

Length 44-50 cm., wingspan to 80 cm.

Voice Drawn out mournful *waaa* with a rising inflection, about 2 seconds long for the female, higher pitched and only 1 second in length for the male. Contact chattering in flocks.

Food Green vegetation, more than 60% land plants. Ducklings feed entirely on insects for the first 3-4 weeks.

Habitat Lightly timbered grassland or parkland, with fresh water and nearby trees. Seldom found in dense or brackish swamps or thick forest.

Range Found Australia wide, but uncommon in arid regions and far tropical north Australia. Nomadic in drier areas.

Geelong Resident in all wetland areas. Near dams in grassland.

Nest In hollow in living tree. 9-12 eggs are laid on bare wood and covered with down.

Breeding September to October in our area, after the spring rains, which will ensure food for the young birds. Nesting activity stimulated by rainfall rather than water level.

Similar Species None

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Is it a duck or is it a goose?

The Wood Duck's scientific name is a mixture of the Greek words for both *goose* and *duck,* with the Latin word for *maned.* Common names have included both Maned Goose and Maned Duck.

Charles Belcher and John Gould both considered it a goose, because of its 'jizz' and its grazing habit, although Gould later declared in his *Birds of Australia,*

> *"Although I have applied the trivial name of goose to this bird it has but little relationship to the typical member of the genus Anser"*

DNA studies have now shown that it belongs with the sub-family Anatinae, along with other ducks.

"Charles Belcher and John Gould both considered it a goose. . . . "

The Australian Wood Duck is our only representative of the perching ducks. It is not close to the American species of wood duck.

Australian Wood Duck are waterfowl that run swiftly, swim awkwardly and fly slowly, low to the ground, threading their way through trees. They rarely spend time in the water and do most of their feeding on land. They need fresh water with trees nearby for perching. They feed by night and rest up by day. They are seldom found on the water. We were therefore lucky to see a raft of wood duck swim across a large dam near the You Yangs during the Challenge Bird Count last December. They float higher than other ducks.

The birds are solitary when breeding, but gregarious at other times. After breeding they gather into flocks and settle into a 'camp'. Camp sites are traditional. The flock spends the day there and goes out, in small groups, to the feeding ground, in the late afternoon, not returning until dawn. Groups follow the same path and, unless the birds are harried, the same feeding ground is visited night after night until the food is exhausted, after which another is selected.

When alarmed, other ducks become restless and may quack, but Wood Ducks freeze, head and neck extended, silently alert.

Australian Wood Duck have benefited from white settlement which has provided dams, short grass and shelter belts. When Charles Belcher published *Birds of Geelong* in 1914, he had not seen a Wood Duck in the district for nearly 20 years.

Now they are common, and I can nearly always be sure of seeing some at a dam beside the Pollocksford Road. It is a good spot, with a line of sugar gums close by for daytime resting. At the moment there is a flock of about 30 birds 'camped' there. Although the grass in the surrounding paddocks is dry, the birds can no doubt feed on fresh grasses on the banks of the Barwon River only a few hundred metres away. They haven't yet found my lush vegetable garden down the road! In some parts of Australia Wood Ducks have been unpopular because of the damage done to new crops.

John Gould wrote:

> *"During the period I had the privilege of observing the birds of Australia in a state of nature, no one of the natatorial [swimming] forms interested me more than the present species".*

Do you agree?

□

EXCURSION REPORT
. . . Trevor Pescott

OTWAY CAMPOUT
January 23-26, 1998
Based at Tanybryn, Belmont High School Camp. Members of the Otway Ranges Environmental Ranges Network (OREN) and 19 club members attended.

Friday 23 January

Most of the campers arrived during the afternoon or evening, taking advantage of the fine weather to travel early to Tanybryn. Trevor Pescott spoke briefly about the Otway Ranges, their formation, history, flora and fauna.

Saturday 24 January

We drove out to Turton's Track, stopping at several points to try to identify the wide range of shrubs and herbs that grow along the roadside. Daisy-bushes caused some confusion although the Musk was easily separated from the others. It may have helped if the plants were flowering for the foliage appeared variable, depending on the soil and aspect where they grew. The Snow Daisy-bush was found here, along with pennywort, buttercup, Self-heal, mint, Banyalla and Bird's-foot Trefoil.

Another interesting find was a large patch of vivid yellow slime-mould that had gathered over fallen leaves beside the track.

We had a close look at a colony of Green Bird-orchids growing on a fallen log, and found the flower-spike of a Cinnamon Bells orchid; unfortunately we were too late to see the flowers of either species open.

There was a large flock of White-throated Needletails circling over the track, wings and tails fanned out, and we wondered what weather that forebode - by nightfall, when there was heavy, persistent rain, we knew the answer!

From Turton's Track we went to Beech Forest and after a late morning tea at the information display, we drove to Hopetoun Falls - only to find the walking Track closed for repairs. Our main purpose, however, was to look at the Snow-berry that grows by the car park, and speculate how those solitary plants of a Tasmanian species came to be here.

The hindquarters of a rat, victim perhaps of a feral cat, presented a poser for identification - the dense, soft, dark fur suggested Broad-toothed Rat but that was unlikely. The pale grey feet put a more reasonable answer in Bush Rat.

Lunch was at Triplet Falls . The discovery of two adult stone-flies resting quietly on a tree trunk was a highlight of the weekend.

Out along Young's Creek Road we stopped to admire the Myrtle Beech and Mountain Ash growing along the roadside, and puzzled over the mosses that looked rather like miniscule fir trees, holding their spore-cases aloft on slender stems.

The last port-of-call was Browntown Track where Tall Astelias grow in a boggy stream. They are another rare plant, confined in the Otways to this one site. The Victorian Christmas-bush had almost finished flowering, as had the onion orchid that we found, but the small white flowers on the Tree Lomatia were still to reach their best.

Keen-eyed birdo Polly Cutcliffe found a juvenile Shining Bronze-Cuckoo whose hosts, a pair of Superb Fairy-wrens, were forever responding to its calls for food.

Then the rain began and, although at night it encouraged several Swift Moths to come to the light lure set by Les Barrow, it generally dampened the bush if not our enthusiasm.

During the evening, members of OREN came to advise on the Colac-Otway Shire planning scheme.

Sunday 25 January

Rain delayed our start, but by 11.00a.m. we were travelling into finer weather down Wild Dog Road to Apollo Bay. Here, and in many other places, we found Ragwort flowering.

Out through the Bay to Shelly Beach where after scrambling down the track for a walk along the rocky shore, we returned to lunch under the Blue Gums. Graeme Tribe found nests of Grey Shrike Thrush and Eastern Yellow Robin beside the track, we heard Rufous Bristlebirds and could only just see the Short-tailed Shearwaters out at sea.

Sea Celery was growing among the rocks on the beach rocks and Twiggy Daisy-bush, Hop Goodenia and Sweet Bursaria were in flower beside the track. Both Prickly Coprosma and Privet Mock-olive were heavy with fruit but while the former are sweet, the latter are unbearably bitter to taste.

Next we went to Mait's Rest - but holiday crowds sent us at once on towards Cape Otway where we found some peace and several beautiful Hyacinth orchids in the bushland. Beside Parker River, Tender Brake was growing in profusion, and there were some fine Hemp Bushes beside the water.

Spotted Pardalotes were seen there too, and several Koalas were noted high in the riverside gums.

Later, we returned to Mait's Rest where we saw a single Gunn's Orchid (not in flower) and admired the Slender Tree-ferns, but wondered how much longer the rainforest will survive given the obvious ravages of the Myrtle Beech Wilt. It was late in the afternoon, but not too early for an antechinus to be out hunting.

Monday 26 January

We were taken to several logging coupes along the Benwerrin-Mt Sabine, or Ridge, Road by members of OREN and we discussed means of better protecting and rehabilitating the forest. Among the birds seen here was a white Grey Goshawk, and later, when we drove down to the Grey River Reserve, we added Blue-winged Parrot and Bassian Thrush.

Lunch was taken at the top of Wye Track where butterflies of several species were found, we looked at ripening berries of Mountain Pepper, and tried without success to estimate how many tadpoles were present in a water-hole.

At the Grey River Reserve we tried to decide if one plant really was a Skirted Tree-fern, but had no doubt about the identity of a Pink Robin and Rufous Fantail.

Throughout the forest, many plants were found - Tasman Flax-lily, Fireweed Groundsel, Common Cassinia, Blanket-leaf, Blackwood, Messmate, Mountain Correa, Satinwood, Kangaroo Apple and White Elderberry were just a few that caught our attention.

Along the Ridge Road, several fine specimens of Brooker's Gum were also closely examined, the green 'sox' of mosses, lichens and ferns at the base of the trunk aiding identification.

I would like to thank all who participated in this campout,making it both pleasant and challenging, in particular those who undertook particular tasks without any hint of complaint.

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OTWAY PLANT LIST January 23-26, 1998

The following list are the plants referred to in the general report of the weekend excursion. No comprehensive plant list was made.

Tender Brake	*Pteris tremula*
Skirted Tree-fern	*Cyathea X marcescens*
Slender Tree-fern	*Cyathea cunninghamii*
Tall Astelia	*Astelia australiana*
Tasman Flax-lily	*Dianella tasmanica*
Green Bird-orchid	*Chiloglottis cornuta*
Hyacinth orchid	*Dipodium punctatum*
Common Onion-orchid	*Microtis unifolia*
Cinnamon Bells	*Gastrodia sesamoides*
Gunn's Orchid	*Sarcochilus australis*
Sea Celery	*Apium prostratum*
Pennywort	*Hydrocotyle sp.*
Blanket-leaf	*Bedfordia arborescens*
Common Cassinia	*Cassinia aculeata*
Musk Daisy-bush	*Olearia argophylla*
Snow Daisy-bush	*Olearia lirata*
Twiggy Daisy-bush	*Olearia rugosa*
Ragwort	*Senecio jacobaea*
Fireweed Groundsel	*Senecio linearifolius*
White Elderberry	*Sambucus gaudichaudiana*
Tutsan	*Hypericum androsaemum*
Snow-berry	*Gaultheria hispida*
Bird's-foot Trefoil	*Lotus corniculatus*
Myrtle Beech	*Nothofagus cunninghamii*
Hop Goodenia	*Goodenia ovata*
Mint	*Mentha sp.*
Victorian Christmas-bush	*Prostanthera lasianthos*
Self-heal	*Prunella vulgaris*
Hemp Bush	*Gynatrix pulchella*
Blackwood	*Acacia melanoxylon*
Austral Mulberry	*Hedycarya augustifolia*
Brooker's Gum	*Eucalyptus brookeriana*
Blue Gum	*Eucalyptus globulus*
Messmate	*Eucalyptus obliqua*
Mountain Ash	*Eucalyptus regnans*
Privet Mock-olive	*Notelaca ligustrina*
Sweet Bursaria	*Bursaria spinosa*
Banyalla	*Pittosporum bicolor*
Tree Lomatia	*Lomatia fraseri*
Buttercup	*Ranunculus sp.*
Prickly Coprosma (Currant-bush)	*Coprosma quadrifida*
Mountain Correa	*Correa lawrenciana*
Satinwood	*Phebalium squameum*
Kangaroo Apple	*Solanum sp.*
Bootlace Bush	*Pimelea axiflora*
Mountain Pepper	*Tasmannia lanceolata*

(List compiled by John James)

OTWAY MAMMALS LIST
January 23-26, 1998

Antechinus sp.	one at Mait's Rest
Black Wallaby	several along roadsides
Red-necked Wallaby	one at Ridge Road
Koala	several Parker River
Bush? Rat	hindquarters at Hopetoun Falls

Excavations made by Echidnas were also obvious.

OTWAY BIRD LIST January 23-26, 1998

Australian Wood Duck	flock on Apollo Bay dam
Pacific Black Duck	small flocks at farm dams
Short-tailed Shearwater	flocks off Shelly Beach
Little Pied Cormorant	one at Apollo Bay
Straw-necked Ibis	near Apollo Bay, flock
Black-shouldered Kite	near Apollo Bay, one
Grey Goshawk	one white over Ridge Road
Wedge-tailed Eagle	several over open land
Purple Swamphen	Barham River
Masked Lapwing	near Apollo Bay
Pacific Gull	beach, two
Silver Gull	beach, common
Crested Tern	beach at Barham River, flock
Yellow-tailed Black-Cockatoo	small group over pines
Sulphur-crested Cockatoo	near Tanybryn
Australian King Parrot	Parker River, Tanybryn, few
Crimson Rosella	common throughout forest
Blue-winged parrot	several along Grey River Rd
Fan-tailed Cuckoo	Turton's Track, two seen
Shining Bronze-Cuckoo	juvenile fed by fairy-wren Browntown Track
White-throated Needletail	flock circling over Turton's Track, and over Cape Otway Road
Laughing Kookaburra	common
White-throated Treecreeper	common in forest
Superb Fairy-wren	very common
Spotted Pardalote	Parker River, pair at bridge, nesting?
Rufous Bristlebird	heard Shelly Beach
White-browed Scrubwren	common
Brown Thornbill	common
Yellow-rumped Thornbill	farmland Wild Dog Road, small flock
Red Wattlebird	common
Little Wattlebird	several in Apollo Bay
Yellow-faced Honeyeater	common
White-eared Honeyeater	few at Parker River
Brown-headed Honeyeater	several Parker River
White-naped Honeyeater	small numbers Parker River
Crescent Honeyeater	common in forest
New Holland Honeyeater	several seen
Eastern Spinebill	common in forest
Rose Robin	one female Grey River
Eastern Yellow Robin	common, nest with young Shelly Beach
Golden Whistler	common
Grey Shrike-thrush	common, nest with 3 young Shelly Beach
Magpie-lark	several Apollo Bay
Rufous Fantail	one Grey River
Grey Fantail	common
Black-faced Cuckoo-shrike	several over forest
Australian Magpie	common open land
Pied Currawong	several Parker River
Forest Raven	scattered along roads in forest
Little Raven	large flocks over cleared land
Satin Bowerbird	several Tanybryn
House Sparrow	Apollo Bay
Red-browed Finch	several small flocks
European Goldfinch	flocks over Wild Dog Road
Welcome Swallow	over forest at Turton's Track
Silvereye	quite plentiful in forest
Bassian Thrush	several Grey River Road, Ridge Road
Common Blackbird	common
Common Starling	many at Apollo Bay

(List compiled by Polly Cutcliffe, Trevor Pescott)

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FEBRUARY MEETING
. . . Roy Whiteside

Report of illustrated talk on "LIFE THROUGH THE AGES AT GEELONG" given by Jack Douglas.

The speaker is a retired geologist who worked for many years in geological surveying for the Victorian Government in the old Mines Department. He aims to show some of the life forms revealed by examination of core rock samples taken by drilling to some 3 km below ground eg. when investigating for ground water. Fern fossils in a core sample reveal that forests once covered the surface of the land.

CAMBRIAN rocks are the oldest ones in Victoria.

Evidence of early sea life in rocks are TRILOBITES (animals which had three lobes) but these became extinct during the PALAEOZOIC period.
The main rock type below Geelong is CRETACEOUS which goes to a depth of about 3.5 km. There are also SILURIAN rocks eg. near Queens Park and various TERTIARY formations eg. limestone at Batesford and Jan Juc. More recent QUATERNARY rock is also present in areas of sand dunes and flood plains.
Igneous rocks in the form of granites and basalt are found in the Geelong region. These were formed after molten rock had solidified. Fossils of tree stumps are engulfed in basalts eg.at Clifton Hill. Evidence of life is seen in sedimentary rock which essentially is laid down under water.

A diagram was shown representing a slice through some 100 km. of the surface of the Earth from Mt. Duneed to Daylesford showing the major rock types. The QUATERNARY system is too thin to be shown on this scale, but some basalt flows are shown. Near Geelong are CRETACEOUS rocks, an intrusive granite mass (eg. at Dog Rocks) and a CAMBRIAN rock outcrop near the Fyansford Cement Works. These contain some shelly and marine fossils among the sediments.

Jack's main study and collection of fossils has been of flora. Landscapes have been considerably affected by flora.
GRAPTOLITES. These are a colony of minute animals which evolved and then disappeared in a relatively short time.

In the Geelong region there are no areas where all former time periods are represented. Where the SILURIAN period is not represented we can suggest that the sea may have retreated. CRETACEOUS rock under Geelong has been formed from silt to a depth of 2km. but there are no DEVONIAN or CARBONIFEROUS rocks. The DEVONIAN system comprises a big trough under the sea which was originally joined to Antarctica.

Near Bacchus Marsh there are PERMIAN rocks which were associated with a period of glaciation and cold.

ERA	PERIOD	EPOCH	Yrs (millions)
	Quatertnary	Recent	
		Pleistocene	1
Cainozoic	Tertiary	Pliocene	
		Miocene	30
		Oligocene	
		Eocene	60
Mesczoic	Cretaceous		110
	Jurassic		140
	Triassic		190
Palaeozoic	Permian		220
	Carboniferous		280
	Devonian		360
	Silurian		400
	Ordovician		450
	Cambrian		500
Precambrian			1200

MESOZOIC era : TRIASSIC rocks are represented eg. near Bacchus Marsh. JURASSIC rocks are not represented in Victoria. CRETACEOUS rocks form the bed rock at Geelong forming an outcrop near Queen's Park.

Samples of fossils were shown of a fern fossil (sample from Heathfield) and from CRETACEOUS rock in the Otways (containing conifers).

The nature of forests since the CRETACEOUS period has changed and most plants have disappeared.

Fossil fish have been found in CRETACEOUS rocks at Koonwarra in Gippsland and Salsified wood has been found in the Otway Basin.

Bursts of life including bacteria evolved during the CAMBRIAN period. The first life emerged onto land in the SILURIAN period.

The oldest known plants which form any land cover on the shallow flood plain marshes close to the sea are believed to be related to Leucopogon and Selegianella (Spike moss) species of which are found today.

PERMIAN plants of the Ice Age :
A widespread fossil plant in the southern continents (found at Bacchus Marsh) is Glaucopterus. This is a key to the constitution of Gondwanaland as leaves of this genus are very similar today.

A tiny specimen of dinosaur bone has been found at Inverloch.
Many relatives of today's plants are represented in fossils from the end of the CRETACEOUS period which was the origin of Angiosperms (flowering plants). Impressions of the leaves of the Gingko tree show the characteristic breathing pores (stomatae) which are very similar to the Gingko plants of today.

The main TERTIARY rocks of the Geelong region are of the marine type and these are used in the manufacture of cement. Before the TERTIARY era there were plants very different from those growing today. Many different orders (not just species) completely disappeared in the middle of the CRETACEOUS period. eg. Benetadales (a palm/fern combination). Extinction could have been caused by volcanic activity, climate changes or impact of meteorites.

MIOCENE epoch: Anglesea coal dates from this time and contains deposits which show fossils of Casuarina, Proteacea and Cycads species. The epoch is also represented in the limestone cliffs of Jan Juc.

Graeme Tribe gave a vote of thanks. □

BIO-DIVERSITY NOTES
. . . Ade Foster

Excursion December 7, 1997.

Just four of the regular crew assembled at St. Leonard's for what was planned to be a gentle walk through the Edward's Point faunal reserve. I had forgotten my hat, and both Bejanke and I were without binoculars. However, we strolled along the central pathway looking at plants, birds and little scurrying lizards for some distance.

We decided to strike out across a salt pan to the shores of Swan Bay to see what waders were about. We were more than a little surprised to find the tracks of a wallaby or small kangaroo in the mud, and delighted with a beautiful little spined spider in her web in the Poa grass. The shoreline revealed several waders, one with a strikingly white rump. Bejanke hadn't bought her field guide, as she usually does and so their identity remains a mystery. (Does anyone recognise this rather poor description?)

We followed the shore of the lake southwards, with the intention of rounding the point and walking along the beach back to the car-park. The tide was falling still and there was a lot to keep us interested in the exposed mud. Snails, worms and jellyfish, shells and debris, all were examined and discussed. Dennis found and lifted a large piece of a broken sail-board, revealing two beautiful little scorpions, less than happy with the disturbance. Bejanke found a little Quick-silver spider, its tiny abdomen shining like mercury in the bright sun.

As we rounded the point, we realised two things. Firstly, we had walked a lot further than intended. We were all quite hungry, and lunch was back in the car, rather than in our back-packs. Secondly, it was not simply a matter of walking across to the beach, there were acres of exposed mud-flats blocking the way. Intrepidly, Dennis pushed onwards, striding purposefully across the mud to show the more trepid how easy it was. Claire followed behind and immediately disappeared up to her knees in the evil smelling black ooze. With Den pulling and me pushing we eventually moved her to firmer ground. Bejanke's contribution was to lie on the ground laughing hysterically, and wishing she had remembered her camera. We were forced to build make-shift bridges with drift-wood and made several abortive attempts to cross the mud before we retraced our steps and waded from point to point across the shallow bay, never more than ankle deep, but expecting any minute to go base over apex on the slippery, muddy bottom.

Our next hurdle came in the shape of large clumps of Poa grass, growing closely together, through which we had to blaze a trail for some six or seven hundred metres. This particular species is quite coarse and very prickly and we weaved and cursed our way through the waist high tangle, pausing at each clearing while Claire took a short rest on her folding chair. I captured two beautiful Wood White butterflies, feeding on a flowering mistletoe, which was growing in a sheoak. Eventually, we reached the beach, and after a short rest headed back towards the car. We examined shells and beach washed stingrays and watched the occasional Pied Oyster-catcher flying past into the stiff breeze, finally arriving back for a very late lunch at three pm., hot, tired, sun-burned, hungry and determined to prepare for the next trip a little more thoroughly.

□

BIRD OBSERVATION REPORTS February 1998 *-- compiled by Barry Lingham.*

The Summer Wader count allowed a thorough count of the Moolap Salt Works. Large numbers of Banded Stilts have returned, the most for many years. The Salt Works, along with the OGNR, had large numbers of Welcome Swallows. The swallows tend to form large flocks at this time of year and can be seen hawking for insects over many local waterways or perched on powerlines. Another bird that tends to form larger flocks at this time of year is the New Holland Honeyeater. We had two reports of corroborees, where a few birds start to make a noise and they are joined by other birds from nearby to form a chattering, raucous group before departing in all directions. It would be interesting to gain more observations of this phenomenon or other flockings of birds that often occur during Autumn.

It was good to have several successful breeding records. The two young Blue-billed duck will add to Lake Lorne's population. This is the best place to find these uncommon birds. The Beautiful Firetail is a bird of the Otway heathlands that is rarely reported. Marilyn and Margaret were lucky enough to find one last November.

Gang-gangs have arrived back in the Highton area and their presence was soon noticed by the bird observers of that area. The Rufous Fantail that Craig noted is the first for this year. They should be passing through over the next month, so keep an eye out for them, even in suburban gardens. The migratory waders will soon be departing, but the winter visitors will be returning , so we hope for plenty of records next month. Try to establish the day that a species departs from an area; this will require fairly constant checking!

Observations were submitted by Ray Baverstock (RBa), Craig Morley (CMo), Ron Mole (RMo), Margaret Cameron (MAC), Valda Dedman (VWD), Hans Strefkerk (HS), Polly Cutcliffe (PCu), Laurie Drinnan (LD), Jan & Vernon Cohen (J&VCo), Robert Preston (RP), Marilyn Hewish (MHe), Dean Hewish (DHe), Kaye Campbell (KC), Barry Lingham (BL), Deborah Evans (DE), Rachel Keary (RK), Penny Smith (PS), Valerie Lloyd-Jones (VLJ).

(Continued on page 16)

(Continued from page 15)

Darter	1	8-Feb-98	Werribee River via Werribee zoo. One female.	HS
Little Black Cormorant	12	2-Feb-98	Barwon River. Newtown. With 2 Pied Cormorants.	RBa
Rufous Night Heron	2	10-Dec-97	Yolinko wetlands, Barwon River. 1 Adult, 1 immature.	PCu
Blue-billed Duck	6+2	7-Dec-97	Lake lorne, Drysdale. 6 Adults, 2 Young.	MAC/MHe
Black-shouldered Kite	1	17-Feb-98	Jerringot	VWD
Whistling Kite	1	7-Feb-98	Ceres. Merrawarp Road. Also on 13/2/98.	VWD
	1	7-Feb-98	Ceres. Merrawarp Road. Juvenile- roadkill.	VWD
Brown Goshawk	1	21-Feb-98	Eastern Park.	CMo
	1	21-Feb-98	Newtown. Also on 22/2/98.	CMo
Little Eagle	1	22-Feb-98	Ocean Grove Nature Reserve. Blotchy dark morph.	CMo
Black Falcon	1	29-Jan-98	Balliang. On Geelong Bacchus marsh road.	PCu
Australian Hobby	1	22-Feb-98	Leopold.	CMo
	1	Jan-Feb	Newtown. Noted after absence of some 12 months.	CMo
	1	1-Feb-98	Moolap Salt Works.	CMo
	1	28-Jan-98	Belmont.	HS
	1	16-Feb-98	Freshwater Creek.	HS
Buff-banded Rail	2	4-Feb-98	Jerringot. Two juveniles feeding together.	PCu
Baillon's Crake	2	30-Nov-97	Jerringot. Two also noted on 7/12/97	MAC/MHe
Australian Spotted Crake	3	1-Feb-98	Moolap Salt Works.	PCu/KC+
Banded Lapwing	13	23-Feb-98	Balliang East. In stoney paddock with thistles.	PCu
Black-fronted Plover	3	22-Feb-98	Jerringot	MHe
Banded Stilt	3650	1-Feb-98	Moolap Salt Works.	MHe+
Eastern Curlew	1	8-Feb-98	Avalon Salt Pans.	J&VCo
Latham's Snipe	20	17-Feb-98	Jerringot	VWD
	163	1-Feb-98	Moolap Salt Works.	MHe+
Arctic Jaeger	4	28-Dec-97	Corio Bay off Point Henry.	DHe
Silver Gull	2	7-Dec-97	Moolap Salt Works. Breeding record. Two chicks.	MAC/MHe
	15	1-Feb-98	Moolap Salt Works. All juveniles. (35-40 days old)	MHe+
Gull-billed Tern	1	1-Feb-98	Moolap Salt Works.	MHe+
Yellow-tailed Black-Cockatoo		12	23-Feb-98	Deakin
University (Waurn Ponds)	DE			
Gang-gang cockatoo	6	24-Feb-98	Freshwater Creek.	HS
	6+	14-Feb-98	Belmont. North Valley Road. Seen for last half of February	VWD
	20+	18-Feb-98	Highton. Bellvue Av. Also on 19-2-98.	RMo
	15+	8-Feb-98	Belmont. Seen regularly since the 8th.	KC
	8	8-Feb-98	Highton. Helena St. Heard daily since the 8th.	RBa
Sulphur-crested Cockatoo	45+	2-Feb-98	Balyang Sanctuary.	RBa
Shining Bronze-Cuckoo.	1	24-Dec-97	Lake Victoria, being fed by Fairy-wrens	VLJ
Tawny Frogmouth	1	28-Jan-98	Freshwater Creek. Seen late at night.	HS
	1	4-Feb-98	Pollocksford	VWD
White-throated Needletail	6+	19-Feb-98	Freshwater Creek. Seen again on 20-2-98. Between 2-4pm.	HS
	3+	18-Feb-98	Wallington. In area for several hours in afternoon.	BL
Welcome Swallow	300	22-Feb-98	Ocean Grove Nature Reserve. Large flock.	CMo
	395	1-Feb-98	Moolap Salt Works. Feeding on midges.	MHe+
Black-faced Cuckoo-shrike	1	11-Nov-97	Highton.	PS
Song Thrush	1	21-Feb-98	Botanical Gardens. Unusual visitor.	CMo
	1	9-Feb-98	Highton. Moreton Bay Dr. Also on 12-2-98	PS
Eastern Yellow Robin	2	18-Jan-98	Lerderderg Gorge. 1 adult feeding 1 young.	MHe
	1	5-Feb-98	Belmont. Near Shannon Avenue Bridge.	PCu
Rufous Fantail	1	21-Feb-98	Botanic Gardens. One immature with Grey Fantails.	CMo
Little Grassbird	2	2-Feb-98	Barwon River. Newtown.	RBa
Yellow-tufted Honeyeater	2	18-Jan-98	Lerderderg Gorge. 1 adult feeding 1 young.	MHe
White-plumed Honeyeater	3	11-Feb-98	Mt Duneed. One adult and 2 fledglings.	RK
New Holland Honeyeater	14	23-Feb-98	Highton. A large corroboree at a bird bath. Also on 24-2-98	PS
White-fromted Chat	1	1-Feb-98	Moolap Salt Works. Performing a broken-wing act.	MHe
Silvereye	2	18-Jan-98	Lerderderg Gorge. 1 adult feeding 1 young.	MHe
Spotted Pardalote	1	19-Feb-98	Highton. North Valley Road. Heard over several days.	VWD
Red-browed Finch	30+	mid Feb.	Freshwater Creek. Flocks of six to 30 seen regularly.	HS
Beautiful Firetail	1	30-Nov-97	Cnr of Forest Rd and Flaxbournes Rd. in dense heath.	MAC/MHe
Grey Butcherbird	1	4-Feb-98	Highton. North Valley Road. Also on 6-2-98 & 18-2-98.	VWD
	2	14-Feb-98	Highton. Helena St. Heard daily all of 1998.	RBa
Pied Currawong	4	18-Jan-98	Lerderderg Gorge. 2 adults. 2 young out of nest.	MHe
	1	5-Feb-98	Belmont. Oberon Drive.	RP
Grey Currawong	4	20-Feb-98	Freshwater Creek. Two adults feeding two young.	HS
	7+	18-Jan-98	Lerderderg Gorge. Four families feeding young.	MHe

□

Editor's note: My apologies if parts of this issue appear a little cramped; this is the first time that we have exceeded 12,000 words and there are still three pages held over for next month.

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